

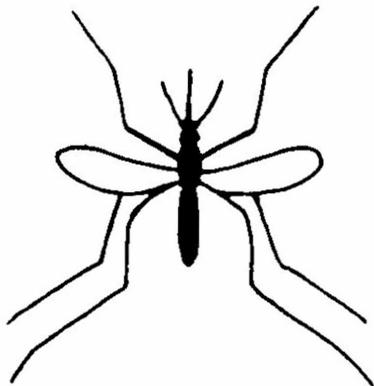
VEE SUMMARY NO. 7

August 22-31, 1972

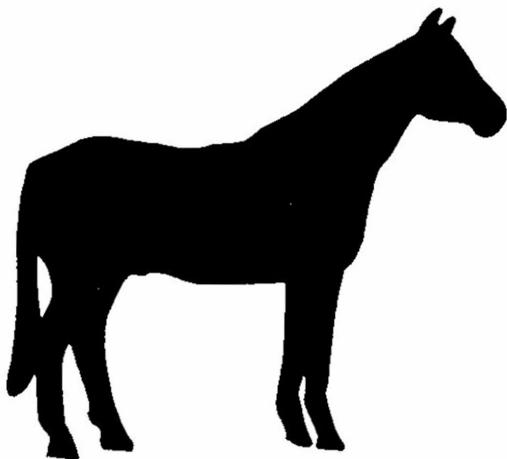
CENTER FOR DISEASE CONTROL

VENEZUELAN EQUINE ENCEPHALITIS SURVEILLANCE

SEPTEMBER 1972



ZOONOSIS



U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

PREFACE

Summarized in this report is information received from State Health Departments, university investigators, virology laboratories and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the surveillance report are most welcome. Please address to:

Center for Disease Control
Attn: Office of Veterinary Public Health Services
Epidemiology Program
Atlanta, Georgia 30333

SUGGESTED CITATION

Center for Disease Control: Zoonoses Surveillance – VEE Summary
No. 7, Aug. 22-31, 1972

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Because of the need to provide information as soon as possible on VEE activity, these surveillance reports will be issued at various intervals--daily, weekly, bi-weekly or monthly--as the urgency of the information demands.

We invite your inquiries or information on VEE and related activities: Center for Disease Control, Office of Veterinary Public Health Services (404) 633-3311, Ext. 3691. Evening or weekend phone numbers:

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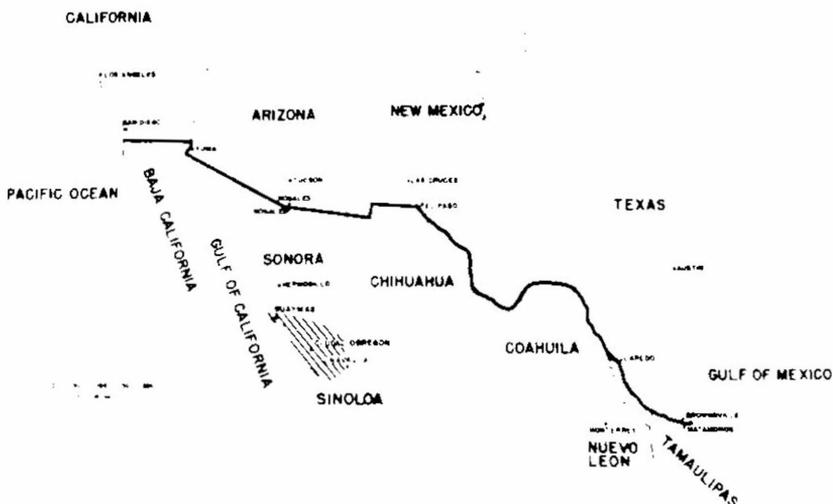
I. SUMMARY

Venezuelan equine encephalitis (VEE) cases in humans and equines were reported in the southern part of the State of Sonora, Mexico, in the last 2 weeks of August 1972. There were no reported equine or human cases of VEE in the United States in the same period. Surveillance activities to monitor possible VEE activity in mosquitoes and equines in the United States are continuing by a number of cooperating federal, state and local agencies. Equine case investigations increased in the United States for August 1972. USDA suggests horses in threatened areas vaccinated in 1971 be revaccinated.

II. INTERNATIONAL NOTES

In response to an inquiry directed to the Mexico Ministry of Health, it was learned that VEE activity has been confirmed in the State of Sonora, Mexico. Several hundred suspect human and equine cases are under investigation. No human cases have been confirmed by the laboratory. The one horse virus isolate reported in VEE Summary No. 6 has been confirmed in the laboratory as the epidemic strain. Investigations of human and equine cases in southern Sonora are underway in the municipios (counties) south and west of Navajoa, around Ciudad Obregon and south of Guaymas. (Figure 1) (Source: Dr. Jorge Cardenas Lara, Epidemiology and Health Campaigns, and Dr. Juan Manuel Campos Terron, Coordinated Health Services, Ministry of Health, Mexico D.F., Mexico)

Fig. 1 VEE ACTIVITY, SONORA, MEXICO, 1972



Heavy rains in mid-August have left extensive amounts of standing water suitable for mosquito breeding in the western parts of Mexico. Arizona has also had some excess surface water problems.

III. STATE ACTIVITIES, VEE SURVEILLANCE, 1972

A. North Carolina

For the month of July 1972, 13 equine cases of encephalitis were reported by North Carolina veterinary practitioners. One case of eastern equine encephalomyelitis (EEE) was confirmed by serology, one by histopathology, and two by virus isolation. No cases of VEE have been reported. (Source: Dr. T. B. Ryan, Director of Diagnostic Laboratories, North Carolina Department of Agriculture, Raleigh, North Carolina)

B. Colorado

Colorado has made 81 equine encephalitis investigations during calendar year 1972. There have been 46 cases of western equine encephalitis confirmed by serology and one by virus isolation. No VEE cases have been reported. (Source: Dr. Martin D. Baum, Chief, Public Health Veterinary Section, Colorado Department of Health, Denver, Colorado)

C. California

No human or equine cases of arbovirus encephalitis have been confirmed, but specimens submitted from suspected cases are increasing and being studied. To date, there is no evidence of VEE virus activity in the state. As of August 30, 1972, there were 41 equines reported to the State Health Department, Veterinary Section, as clinically suspicious for encephalitis. The cases were from 18 counties throughout the state. Forty-three virus isolates have been made from mosquito pools, 11 were Turlock, 18 SLE, 13 WEE, and one unidentified virus. The majority of the isolations, including all the WEE and SLE viruses, have been from mosquitoes collected in Imperial County, California.

A survey of 102 corrals (clubs) and 15 areas in southern California, and a spot check of some 100 premises in Los Angeles County, California, was made to determine VEE vaccination histories. Private veterinary practitioners were also individually questioned as to their observations about vaccination percentages. Of the horses in the "basin area" of Los Angeles County, 95.3 percent were vaccinated for VEE, and 80 percent of the horses in the Antelope Valley were vaccinated for VEE as of September 13, 1971. (Source: Dr. George Humphrey, Chief, Veterinary Section, California Department of Health, Berkeley, California and Dr. Robert J. Schroeder, County Veterinarian, County of Los Angeles, Downey, California)

D. No VEE cases have been reported in Arizona, New Mexico or Texas, but the investigation of sick horses is continuing in these states. New Mexico indicates 46 wildlife specimens were negative for VEE in August 1972. (Reported by Philip M. Hotchkiss, State Public Health Veterinarian, Arizona Department of Health, Phoenix, Arizona; Dr. Dean Price, Veterinarian in Charge, USDA, Albuquerque, New Mexico; Dr. A. B. Rich, State Public Health Veterinarian, Division of Veterinary Medicine, State Department of Health, Austin, Texas)

IV. FEDERAL ACTIVITIES

A. Mosquito Monitoring Activities

The Entomology Research Division, USDA, Denver, Colorado, and the Arboviral Diseases Section, Ecological Investigations Program, Center for Disease Control, Fort Collins, Colorado, have collected mosquitoes for the detection of arbovirus activity in the states of Arizona, Colorado, Louisiana, New Mexico, Oklahoma, and Texas. Cumulative results were 50 WEE, 7 Turlock, and 64 other viral agents isolated. This year 2,219 mosquito pools were collected, and 1,931 have been tested for arbovirus activity from various locations in the six states. No VEE virus has been isolated.

B. Equine Sentinel Site Activities

There have been no serologic conversions from any of the 22 equine sentinel sites in August 1972. One viral agent has been isolated from a sentinel burro in Roswell, New Mexico. Preliminary tests indicate the virus is not a Group A arbovirus. (Source: Dr. Richard O. Hayes, Chief, Arboviral Diseases Section, Ecological Investigations Program, CDC, Fort Collins, Colorado)

C. Equine Encephalitis Case Investigations

Through August 1972, USDA reported that 584 equine cases of encephalitis have been investigated by cooperating state-federal disease control agencies. Of these, 303 investigations were conducted in August. Forty-two of the 50 states have reported investigations. There have been 3 EEE and 2 WEE virus isolations. Five EEE and 158 WEE cases have been supported by serology. Table I shows the distribution of investigations by state. (Source: Dr. Bob Mathis, Animal and Plant Health Inspection Service, USDA, Hyattsville, Maryland)

D. USDA Press Release

In late July, CDC, in cooperation with USDA and the U.S. Army, initiated field surveys in Santa Cruz and Yuma counties, Arizona, and Dona Ana County, New Mexico, to assess the present immunization status of equines against VEE. Teams of veterinarians from CDC, USDA, the U.S. Army (Fort Bliss, El Paso, Texas) and local health officials participated in the survey.

The owners of 1,480 equines reported that 94.6 percent of the animals present in 1971 were vaccinated against VEE. A randomly selected group of 447 animals were bled and serum neutralizing antibody levels determined for VEE, WEE, and EEE. A definite history of VEE vaccination was obtained on approximately 80 percent of the present equine population. Only 50.4 percent of the population sampled had circulating antibodies for VEE. A limited number of mouse neutralization tests were conducted for comparison with the tissue culture neutralization tests. There was good correlation between the two tests.

There was a negative correlation between the presence of EEE and/or WEE antibodies and VEE antibodies, i.e., if EEE or WEE antibodies were present, there was less apt to be VEE antibodies. Statistically this phenomenon was highly significant.

As a result of these findings and the presence of VEE in Mexico, USDA, in a press release dated September 8, recommended increased vaccination efforts. All equines not previously vaccinated for VEE should be vaccinated. These include foals and other additions to the equine population. All foals previously vaccinated at the age of less than 6 months should be revaccinated. As an added precaution it is suggested that horses in threatened areas vaccinated during 1971 be revaccinated. Some horses vaccinated last year may not be protected against the disease either because they failed to properly respond to vaccination or because they were vaccinated under less than ideal conditions. Vaccine is available commercially and can be obtained from private veterinary practitioners. USDA will not, at this time, subsidize vaccination in 1972 as it did in 1971, when nearly 3 million equines were vaccinated against VEE in a program supported by USDA emergency funds. (Reported by Dr. E. E. Saulmon, Deputy Administrator, Veterinary Services, APHIS, USDA, Hyattsville, Md.)

TABLE I

EQUINE ENCEPHALITIS INVESTIGATIONS, UNITED STATES, 1972

STATE	AUGUST INVESTIGATIONS	CUMULATIVE INVESTIGATIONS
Alabama	1	4
Alaska	0	0
Arizona	0	1
Arkansas	0	3
California	0	0
Colorado	61	81
Connecticut	0	0
Delaware	1	4
District of Columbia	0	0
Florida	6	10
Georgia	3	6
Hawaii	0	0
Idaho	10	15
Illinois	3	13
Indiana	2	9
Iowa	7	14
Kansas	13	23
Kentucky	1	1
Louisiana	2	11
Maine	1	2
Maryland	1	9
Massachusetts	1	1
Michigan	1	2
Minnesota	53	68
Mississippi	2	9
Missouri	1	1
Montana	18	20
Nebraska	1	8
Nevada	0	0
New Hampshire	0	0
New Jersey	0	3
New Mexico	2	9
New York	1	2
North Carolina	9	28
North Dakota	19	28
Ohio	8	15
Oklahoma	7	23
Oregon	6	14
Pennsylvania	1	3
Rhode Island	0	0
South Carolina	1	6
South Dakota	20	34
Tennessee	0	2
Texas	8	44
Utah	0	2
Vermont	0	2
Virginia	1	6
Washington	10	17
West Virginia	1	1
Wisconsin	0	0
Wyoming	20	30
TOTAL	303	584

**STATE EPIDEMIOLOGISTS AND
STATE PUBLIC HEALTH VETERINARIANS**

Key to all disease surveillance activities are the State Epidemiologists, who are responsible for collecting, interpreting, and transmitting data and epidemiologic information from their individual States. Their contributions to this report are gratefully acknowledged. In addition, valuable contributions to zoonoses surveillance reports are made by State Public Health Veterinarians.

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*Dual assignment